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What is claimed is:

- 1 1. A system for interleaving data in a wireless transmitter comprising:
2 a memory buffer; and
3 means, coupled to said memory buffer, for sending downstream every C^{th} bit of
4 an input data stream and for writing the remaining bits of said input data stream to said
5 memory buffer according to a first interleaving pattern.
- 1 2. The system of claim 1, wherein said every C^{th} bit is sent downstream without
2 being stored in said memory buffer.
- 1 3. The system of claim 1, wherein C comprises the number of columns in said
2 memory buffer.
- 1 4. The system of claim 1, wherein said means further comprises means for reading
2 said remaining bits from said memory buffer, forming an output data stream.
- 1 5. A system for interleaving data in a wireless transmitter comprising:
2 a memory buffer;
3 means for sending downstream every C^{th} bit of an input data stream;
4 means for writing the remaining bits of said input data stream to said memory
5 buffer; and
6 means for reading bits from said memory buffer according to a first interleaving
7 pattern.
- 1 6. A transmitter that transmits data via a wireless link, said transmitter comprising:
2 a medium access control layer;
3 a coding/multiplexing unit including:
4 a memory buffer, and
5 means, coupled to said memory buffer, for sending downstream every C^{th}
6 bit of an input data stream from said medium access control layer and for writing the
7 remaining bits of said input data stream to said memory buffer according to a first
8 interleaving pattern; and
9 a modulator coupled between the wireless link and said coding/multiplexing
10 unit.

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7. A system for interleaving data in a wireless transmitter comprising:
a memory buffer; and
a read/write unit, coupled to said memory buffer, wherein said read/write unit is configured to send downstream every C^{th} bit of an input data stream and to write the remaining bits of said input data stream to said memory buffer according to a first interleaving pattern.

8. A system for interleaving data in a wireless transmitter comprising:
a memory buffer; and
means for sending downstream a first radio frame from an input code block, for storing one or more additional radio frames from said input code block in said memory buffer and discarding any remaining radio frames from said input code block, for sending said additional frames downstream from said memory buffer, and for causing said input code block to be re-calculated.

9. A method for interleaving data in a wireless transmitter comprising:
sending downstream every C^{th} bit of an input data stream; and
writing the remaining bits of said input data stream to a memory buffer according to a first interleaving pattern.

10. The method of claim 9, wherein said every C^{th} bit is sent downstream without being stored in said memory buffer.

11. The method of claim 9, wherein C comprises the number of columns in said memory buffer.

12. The method of claim 9, further comprising reading said remaining bits from said memory buffer to form an output data stream.

13. A method for interleaving data in a wireless transmitter comprising:
sending downstream every C^{th} bit of an input data stream;
writing the remaining bits of said input data stream to a memory buffer; and
reading bits from said memory buffer according to a first interleaving pattern.

14. A method for interleaving data in a wireless transmitter comprising:
(a) sending downstream a first radio frame from an input code block;

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- 3 (b) storing one or more additional radio frames from said input code block in
- 4 a memory buffer and discarding any remaining radio frames from said input code block;
- 5 (c) reading said additional radio frames from said memory buffer and
- 6 sending said additional frames downstream; and
- 7 (d) recalculating said input code block and repeating operations (a) through
- 8 (d) until said remaining radio frames have been sent downstream.

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